

APPARATUS AND METHOD FOR PROVIDING DIMMING CONTROL OF LAMPS  
AND ELECTRICAL LIGHTING SYSTEMS

ABSTRACT OF THE DISCLOSURE

Dimming of an electrical lamp of the type driven by a ballast is provided by a reactive power device in series between the AC supply and the ballast. The reactive power device provides a variable auxiliary voltage out of phase by 90 or 270 degrees with the current such that a smaller magnitude voltage is applied to the lamp. The dimming device has a switch to enable/disable dimming. When the switch is enabled, the voltage applied to the lamp is controlled by a half-bridge inverter with a pair of totem pole power electronic switches, along with a pair of DC series capacitors and a low-pass filter.